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#5 OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/074,328

DATE: 07/09/2002
TIME: 15:03:42

Input Set : N:\Crf3\RULE60\10074328.raw
Output Set: N:\CRF3\07092002\J074328.raw

SEQUENCE LISTING

ENTERED

- 3 (1) GENERAL INFORMATION:
 - 5 (i) APPLICANT: BROW, MARY ANN D.
GROTELUESCHEN HALL, JEFF S.
LYAMICHEV, VICTOR
OLIVE, DAVID M.
PRUDENT, JAMES R.
- 11 (ii) TITLE OF INVENTION: DETECTION OF NUCLEIC ACID SEQUENCES BY
12 INVADER-DIRECTED CLEAVAGE
- 14 (iii) NUMBER OF SEQUENCES: 48
- 16 (iv) CORRESPONDENCE ADDRESS:
 - 17 (A) ADDRESSEE: MEDLEN & CARROLL
 - 18 (B) STREET: 220 MONTGOMERY STREET, SUITE 2200
 - 19 (C) CITY: SAN FRANCISCO
 - 20 (D) STATE: CALIFORNIA
 - 21 (E) COUNTRY: UNITED STATES OF AMERICA
 - 22 (F) ZIP: 94104
- 24 (v) COMPUTER READABLE FORM:
 - 25 (A) MEDIUM TYPE: Floppy disk
 - 26 (B) COMPUTER: IBM PC compatible
 - 27 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 - 28 (D) SOFTWARE: PatentIn Release #1.0, Version #1.25
- 30 (vi) CURRENT APPLICATION DATA:
 - C--> 31 (A) APPLICATION NUMBER: US/10/074,328
 - C--> 32 (B) FILING DATE: 12-Feb-2002
 - 33 (C) CLASSIFICATION:
- 36 (vii) PRIOR APPLICATION DATA:
 - 37 (A) APPLICATION NUMBER: US/08/599,491
 - 38 (B) FILING DATE: 23-JAN-1996
- 40 (viii) ATTORNEY/AGENT INFORMATION:
 - 41 (A) NAME: INGOLIA, DIANE E.
 - 42 (B) REGISTRATION NUMBER: P-40,027
 - 43 (C) REFERENCE/DOCKET NUMBER: FORS-01802
- 45 (ix) TELECOMMUNICATION INFORMATION:
 - 46 (A) TELEPHONE: (415) 705-8410
 - 47 (B) TELEFAX: (415) 397-8338
- 50 (2) INFORMATION FOR SEQ ID NO: 1:
 - 52 (i) SEQUENCE CHARACTERISTICS:
 - 53 (A) LENGTH: 2506 base pairs
 - 54 (B) TYPE: nucleic acid
 - 55 (C) STRANDEDNESS: double
 - 56 (D) TOPOLOGY: linear
 - 58 (ii) MOLECULE TYPE: DNA (genomic)

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62	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:	
64	ATGAGGGGGGA TGCTGCCCT CTTTGAGCCC AAGGGCCGGG TCCTCCTGGT GGACGGCCAC	60
66	CACCTGGCCT ACCGCACCTT CCACGCCCTG AAGGGCCTCA CCACCAGCCG GGGGGAGCCG	120
68	GTGCAGGCAG TCTACGGCTT CGCCAAGAGC CTCCCTCAAGG CCCTCAAGGA GGACGGGGAC	180
70	GCGGTGATCG TGGTCTTGA CGCCAAGGCC CCCTCCTTCC GCCACGAGGC CTACGGGGGG	240
72	TACAAGGCAGG GCCGGGGCCC CACGCCGGAG GACTTCCCCC GGCAACTCCG CCTCATCAAG	300
74	GAGCTGGTGG ACCTCCTGGG GCTGGCGCGC CTCGAGGTCC CGGGCTACGA GGCGGACGAC	360
76	GTCCTGGCCA GCCTGGCAA GAAGGCGGAA AAGGAGGGCT ACGAGGTCCG CATCCTCACC	420
78	GCCGACAAAG ACCTTACCA GCTCCTTCC GACCGCATCC ACGTCCCTCCA CCCCAGGGGG	480
80	TACCTCATCA CCCCGGCCTG GCTTGGGAA AAGTACGGCC TGAGGCCCCA CCAGTGGGCC	540
82	GACTACCGGG CCCTGACCGG GGACGAGTCC GACAACCTTC CCGGGGTCAA GGGCATCGGG	600
84	GAGAAGACGG CGAGGAAGCT TCTGGAGGAG TGGGGAGCC TGGAAGCCCT CCTCAAGAAC	660
86	CTGGACCGGC TGAAGCCGC CATCCGGAG AAGATCCTGG CCCACATGGA CGATCTGAAG	720
88	CTCTCCTGGG ACCTGGCAA GGTGCGCACC GACCTGCCCT TGGAGGTGGA CTTCGCCAAA	780
90	AGGGGGAGC CCGACCGGGG GAGGCTTAGG GCCTTCTGG AGAGGCTTGA GTTGGCAGC	840
92	CTCCTCCACG AGTTGCCCT TCTGGAAAGC CCCAAGGCC TGGAGGAGGC CCCCTGGCCC	900
94	CCGCCCGGAAG GGGCCTCGT GGGCTTGTG CTTTCCCAC AGGAGCCCAT GTGGGCCGAT	960
96	CTTCTGGCCC TGGCCGCCGC CAGGGGGGGC CGGGTCCACC GGGCCCCCGA GCCTTATAAA	1020
98	GCCCTCAGGG ACCTGAAGGA GGCACGGGGG CTTCTGCCA AAAGACCTGAG CGTTCTGGCC	1080
100	CTGAGGGAAG GCCTTGCCT CCCGCCGGC GACGACCCCA TGCTCCTCGC CTACCTCCTG	1140
102	GACCTTCCA ACACCACCCC CGAGGGGGTG GCCCCGGCCT ACGGCGGGGA GTGGACGGAG	1200
104	GAGGCGGGGG AGCGGCCGC CTTTCCCGAG AGGCTCTCG CCAACCTGTG GGGGAGGCTT	1260
106	GAGGGGGAGG AGAGGCTCT TTGGCTTTAC CGGGAGGTGG AGAGGCCCCCT TTCCGCTGTC	1320
108	CTGGCCCACA TGGAGGCCAC GGGGGTGCCTG CTGGACGTGG CCTATCTCAG GGCCTTGTCC	1380
110	CTGGAGGTGG CCGAGGAGAT CGCCCGCCTC GAGGCCGAGG TCTTCCGCCT GGCGGCCAC	1440
112	CCCTCAACC TCAACTCCCG GGACCAGCTG GAAAGGGTCC TCTTGACGA GCTAGGGCTT	1500
114	CCCGCCATCG GCAAGACGGA GAAGACCGGC AAGCGCTCCA CCAGCGCCGC CGTCCTGGAG	1560
116	GCCCTCCCGG AGGCCACCC CATCGTGGAG AAGATCCTGC AGTACCGGGGA GCTCACCAAG	1620
118	CTGAAGAGCA CCTACATTGA CCCCTGCCG GACCTCATCC ACCCCAGGAC GGGCCGCTC	1680
120	CACACCCGCT TCAACCAGAC GGCCACGGCC ACGGGCAGGC TAAGTAGCTC CGATCCCAAC	1740
122	CTCCAGAACCA TCCCCGCTC CACCCGCTT GGGCAGAGGA TCCGCCGGGC CTTCATCGCC	1800
124	GAGGAGGGGT GGCTATTGGT GGCCTGGAC TATAGCCAGA TAGAGCTCAG GGTGCTGGCC	1860
126	CACCTCTCCG GCGACGAGAA CCTGATCCGG GTCTTCCAGG AGGGGGCGGGA CATCCACACG	1920
128	GAGACCGCCA GCTGGATGTT CGCGTCCCCC CGGGAGGCCG TGGACCCCT GATGCCCGG	1980
130	GCGGCCAAGA CCATCAACTT CGGGGTCCCT TACGGCATGT CGGCCACCG CCTCTCCCAG	2040
132	GAGCTAGCCA TCCCTTACGA GGAGGCCAG GCCTTCATTG AGCGCTACTT TCAGAGCTTC	2100
134	CCCAAGGTGC GGGCCTGGAT TGAGAAGACC CTGGAGGAGG GCAGGAGGCCG GGGGTACGTG	2160
136	GAGACCTCT TCGGCCGCCG CCGCTACGTG CCAGACCTAG AGGGCCGGGT GAAGAGCGTG	2220
138	CGGGAGGCCG CGGAGCGCAT GGCCTCAAC ATGCCGTCC AGGGCACCGC CGCCGACCTC	2280
140	ATGAAGCTGG CTATGGTGA GCTCTTCCCC AGGCTGGAGG AAATGGGGGC CAGGATGCTC	2340
142	CTTCAGGTCC ACGACGAGCT GGTCTCGAG GCCCCAAAAG AGAGGGCGGA GGCGCTGGCC	2400
144	CGGCTGGCCA AGGAGGTCA GGAGGGGGTG TATCCCTGG CCGTGCCTCC GGAGGTGGAG	2460
146	GTGGGGATAG GGGAGGACTG GCTCTCGCC AAGGAGTGT ACCACC	2506
148	(2) INFORMATION FOR SEQ ID NO: 2:	
150	(i) SEQUENCE CHARACTERISTICS:	
151	(A) LENGTH: 2496 base pairs	
152	(B) TYPE: nucleic acid	
153	(C) STRANDEDNESS: double	
154	(D) TOPOLOGY: linear	

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Input Set : N:\Crf3\RULE60\10074328.raw
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156 (ii) MOLECULE TYPE: DNA (genomic)
 160 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
 162 ATGGCGATGC TTCCCCCTTT TGAGCCAAA GGCGCGTGC TCCTGGTGGAA CGGCCACCAC 60
 164 CTGGCCTAAC GCACCTTCTT TGCCCTCAAG GGCCTCACCA CCAGCCGCGG CGAACCCGTT 120
 166 CAGGCGGTCT ACGGCTTCGC CAAAAGCCTC CTCAAGGCCG TGAAGGGAGGA CGGGGACGTG 180
 168 GTGGTGGTGG TCTTTGACGC CAAGGCCCCC TCCTTCCGCG ACAGGGCCTA CGAGGCCTAC 240
 170 AAGGCGGGCC GGGCCCCCAC CCCGGAGGAC TTTCCCCGGC AGCTGGCCCT CATCAAGGAG 300
 172 TTGGTGGACCC TCCTAGGGCT TGTGGGGCTG GAGGTTCCCG GCTTGAGGC GGACGACGTG 360
 174 CTGGCCACCC TGGCCAAGCG GGCAGAAAAG GAGGGGTACG AGGTGCGCAT CCTCACTGCC 420
 176 GACCGCGACCC TCTACCAAGCT CCTTTCCGGAG CGCATCGCCA TCCTCCACCC TGAGGGGTAC 480
 178 CTGATCACCC CGGCGTGGCT TTACGAGAAG TACGGCCTGC GCCCGGAGCA GTGGGTGGAC 540
 180 TACCGGGCCC TGGCGGGGA CCCCTCGGAT AACATCCCCG GGGTGAAGGG CATCGGGGAG 600
 182 AAGACCGCCC AGAGGCTCAT CCGCGAGTGG GGGAGCCTGG AAAACCTCTT CCAGCACCTG 660
 184 GACCAGGTGA AGCCCTCCTT GCGGGAGAAG CTCCAGGC GGATGGAGGC CCTGGCCCTT 720
 186 TCCCGGAAGC TTTCCAGGT GCACACTGAC CTGCCCCCTGG AGGTGGACTT CGGGAGGCGC 780
 188 CGCACACCCA ACCTGGAGGG TCTGGGGCT TTTTGGAGC GGTTGGAGTT TGGAAGCCTC 840
 190 CTCCACGAGT TCGGCCCTCTT GGAGGGGCCG AAGGCGGCAG AGGAGGCCCC CTGGCCCCCT 900
 192 CCGGAAGGGG CTTTTTGGG CTTTCTTTT TCCCGTCCCG AGCCCATGTG GGCGAGCTT 960
 194 CTGGCCCTGG CTGGGGCGTG GGAGGGGCCG CTCCATCGGG CACAAGACCC CCTTAGGGC 1020
 196 CTGAGGGACC TTAAGGGGGT GCGGGGAATC CTGGCCAAGG ACCTGGCGGT TTTGGCCCTG 1080
 198 CGGGAGGGCC TGGACCTCTT CCCAGAGGAC GACCCCATGC TCCTGGCCTA CCTTCTGGAC 1140
 200 CCCTCCAACA CCACCCCTGA GGGGGTGGCC CGGCGTTACG GGGGGGAGTG GACGGAGGAT 1200
 202 GCGGGGGAGA GGGCCCTCCT GGCGGAGCGC CTCTTCCAGA CCCTAAAGGA GCGCCTTAAG 1260
 204 GGAGAAGAAC GCCTGCTTTG GCTTACGAG GAGGTGGAGA AGCGCCTTC CGGGGTGTTG 1320
 206 GCCCGGATGG AGGCCACGGG GGTCCGGCTG GACGTGGCCT ACCTCCAGGC CCTCTCCCTG 1380
 208 GAGGTGGAGG CGGAGGTGCG CCAGCTGGAG GAGGAGGTCT TCCGCTGGC CGGCCACCCC 1440
 210 TTCAACCTCA ACTCCCGCGA CCAGCTGGAG CGGGTGCTCT TTGACGAGCT GGGCCTGCCT 1500
 212 GCCATCGGCA AGACGGAGAA GACGGGGAAA CGCTCCACCA GCGCTGCCGT GCTGGAGGCC 1560
 214 CTGCGAGAGG CCCACCCAT CGTGGACCGC ATCCTGCAGT ACCGGGAGCT CACCAAGCTC 1620
 216 AAGAACACCT ACATAGACCC CCTGCCCGCC CTGGTCCACC CCAAGACCGG CGGCTCCAC 1680
 218 ACCGCTTCA ACCAGACGGC CACCGCCACG GGCAGGCTT CCAGCTCCGA CCCAACCTG 1740
 220 CAGAACATCC CCGTGGCGAC CCCTCTGGG CAGGCATCC GCCGAGCCTT CGTGGCGAG 1800
 222 GAGGGCTGGG TGCTGGTGGT CTTGGACTAC AGCCAGATTG AGCTCGGGT CCTGGCCCAC 1860
 224 CTCTCCGGGG ACGAGAACCT GATCCGGGTC TTTCAGGAGG GGAGGGACAT CCACACCCAG 1920
 226 ACCGCCAGCT GGATGGTCGG CGTTCCCCC GAAGGGTAG ACCCTCTGAT GCGCCGGCG 1980
 228 GCCAAGACCA TCAAATTCGG GGTGCTCTAC GGCATGTCCG CCCACCGCCT CTCCGGGGAG 2040
 230 CTTTCCATCC CCTACGAGGA GGCAGGTGGCC TTCATTGAGC GCTACTTCCA GAGCTACCCC 2100
 232 AAGGTGGGG CCTGGATTGA GGGGACCCCTC GAGGAGGGCC GCCGGCGGGG GTATGTGGAG 2160
 234 ACCCTCTCG GCCGCCGGCG CTATGTGCC GACCTCAACG CCCGGGTGAA GAGCGTGCAC 2220
 236 GAGGCGCGG AGCGCATGGC CTTCAACATG CCGGTCCAGG GCACCGCCGC CGACCTCATG 2280
 238 AAGCTGGCCA TGGTGGGCT TTTCCCCCGG CTTCAGGAAC TGGGGGCGAG GATGCTTTG 2340
 240 CAGGTGCACCG ACGAGCTGGT CCTCGAGGCC CCCAAGGACC GGGGGAGAG GGTAGCCGCT 2400
 242 TTGGCCAAGG AGGTCAATGGA GGGGGTCTGG CCCCTGCAGG TGCCCTGGA GGTGGAGGTG 2460
 244 GGCCTGGGG AGGACTGGCT CTCCGCCAAG GAGTAG 2496
 246 (2) INFORMATION FOR SEQ ID NO: 3:
 248 (i) SEQUENCE CHARACTERISTICS:
 249 (A) LENGTH: 2504 base pairs
 250 (B) TYPE: nucleic acid
 251 (C) STRANDEDNESS: double

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Input Set : N:\Crf3\RULE60\10074328.raw
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252 (D) TOPOLOGY: linear
 254 (ii) MOLECULE TYPE: DNA (genomic)
 258 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

260	ATGGAGGCGA	TGCTTCCGCT	CTTGAAACCC	AAAGGCCGGG	TCCTCCTGGT	GGACGGCCAC	60
262	CACCTGGCCT	ACCGCACCTT	CTTCGCCCTG	AAGGCCTCA	CCACGAGCCG	GGCGAACCG	120
264	GTCAGGCGG	TCTACGGCTT	CGCCAAGAGC	CTCCCTCAAGG	CCCTGAAGGA	GGACGGGTAC	180
266	AAGGCCGTCT	TCGTGGTCTT	TGACGCCAAG	GCCCCCTCCT	TCCGCCACGA	GGCCTACGAG	240
268	GCTTACAAGG	CGGGGAGGGC	CCCGACCCCC	GAGGACTTCC	CCCGGCAGCT	CGCCCTCATC	300
270	AAGGAGCTGG	TGGACCTCCT	GGGGTTTACC	CGCCTCGAGG	TCCCCGGCTA	CGAGGCGGAC	360
272	GACGTTCTCG	CCACCCCTGGC	CAAGAAGGCG	GAAAAGGAGG	GGTACGAGGT	GCGCATCCTC	420
274	ACCGCCGACC	GCGACCTCTA	CCAACTCGTC	TCCGACCGCG	TCGCCGTCTT	CCACCCCGAG	480
276	GCCCACCTCA	TCACCCCGGA	GTGGCTTTGG	GAGAAGTACG	GCCTCAGGCC	GGAGCAGTGG	540
278	GTGGACTTCC	GCGCCCTCGT	GGGGGACCCC	TCCGACAACC	TCCCCGGGGT	CAAGGGCATC	600
280	GGGGAGAAGA	CCGCCCTCAA	GCTCCTCAAG	GAGTGGGGAA	GCCTGGAAAA	CCTCCTCAAG	660
282	AACCTGGACC	GGGTAAAGCC	AGAAAACGTC	CGGGAGAAGA	TCAAGGCCA	CCTGGAAGAC	720
284	CTCAGGCTCT	CCTTGGAGCT	CTCCCGGGTG	CGCACCGACC	TCCCCCTGGA	GGTGGACCTC	780
286	GCCCAGGGGC	GGGAGCCGA	CCGGGAGGGG	CTTAGGGCCT	TCCTGGAGAG	GCTGGAGTTC	840
288	GGCAGCCTCC	TCCACCGAGTT	CCGCCTCCTG	GAGGCCCCCG	CCCCCCTGGA	GGAGGCCCCC	900
290	TGGCCCCCGC	CGGAAGGGGC	CTTCGTGGGC	TTCGTCCCTCT	CCCGCCCCGA	GCCCATGTGG	960
292	GCGGAGCTTA	AAGCCCTGGC	CGCCTGCAGG	GACGGCCGGG	TGCAACGGGC	AGCAGACCCC	1020
294	TTGGCGGGGC	TAAAGGACCT	CAAGGAGGTC	CGGGGCCTCC	TCGCCAAGGA	CCTCGCCGTC	1080
296	TTGGCCTCGA	GGGAGGGCT	AGACCTCGTG	CCCGGGGACG	ACCCCATGCT	CCTCGCCTAC	1140
298	CTCCTGGACC	CCTCAACAC	CACCCCCGAG	GGGGTGGCGC	GGCGCTACGG	GGGGGAGTGG	1200
300	ACGGAGGAGC	CCGCCAACCG	GGCCCTCCTC	TCGGAGAGGC	TCCATCGGAA	CCTCCTTAAG	1260
302	CGCCTCGAGG	GGGAGGAGAA	GCTCCTTTGG	CTCTACCAAG	AGGTGGAAAA	GCCCCCTCTCC	1320
304	CGGGTCCTGG	CCCACATGGA	GGCCACCGGG	GTACGGCTGG	ACGTGGCTTA	CCTTCAGGCC	1380
306	CTTCCCTGG	AGCTTGCAGG	GGAGATCCGC	CGCCTCGAGG	AGGAGGTCTT	CCGCTTGGCG	1440
308	GGCCACCCCT	TCAACCTCAA	CTCCCGGGAC	CAGCTGGAAA	GGGTGCTCTT	TGACGAGCTT	1500
310	AGGCTTCCCG	CCTTGGGGAA	GACGCAAAAG	ACAGGCAAGC	GCTCCACCAAG	CGCCGCGGTG	1560
312	CTGGAGGCC	TACGGAGGC	CCACCCCCATC	GTGGAGAAGA	TCCTCCAGCA	CGGGGAGCTC	1620
314	ACCAAGCTCA	AGAACACCTA	CGTGGACCCC	CTCCCAAGCC	TCGTCCACCC	GAGGACGGGC	1680
316	CGCCTCCACA	CCCGCTTCAA	CCAGACGGGC	ACGGCCACGG	GGAGGCTTAG	TAGCTCCGAC	1740
318	CCCAACCTGC	AGAACATCCC	CGTCCGCACC	CCCTTGGGCC	AGAGGATCCG	CGGGGCCTTC	1800
320	GTGGCCGAGG	CGGGTGGGC	GTGGTGGCC	CTGGACTATA	GCCAGATAGA	GCTCCGCGTC	1860
322	CTCGCCCCACC	TCTCCGGGA	CGAAAACCTG	ATCAGGGTCT	TCCAGGAGGG	GAAGGACATC	1920
324	CACACCCAGA	CCGCAAGCTG	GATGTTCGGC	GTCCCCCGG	AGGCCGTGGA	CCCCCTGATG	1980
326	CGCCGGGCGG	CCAAGACGGT	GAACCTCGGC	GTCCCTACG	GCATGTCCGC	CCATAGGCTC	2040
328	TCCCAGGAGC	TTGCCATCCC	CTACGAGGAG	GGGGTGGCCT	TTATAGAGGC	TACTTCCAAA	2100
330	GCTTCCCCAA	GGTGGGGGCC	TGGATAGAAA	AGACCCCTGGA	GGAGGGGAGG	AAGCAGGGCT	2160
332	ACGTGGAAAC	CCTCTCGGA	AGAAGGCCT	ACGTGCCCGA	CCTCAACGCC	CGGGTGAAGA	2220
334	GCGTCAGGGA	GGCCGGGGAG	CCGATGGCCT	TCAACATGCC	CGTCCAGGGC	ACCGCCGCCG	2280
336	ACCTCATGAA	GCTGCCATG	GTGAAGCTCT	TCCCCCGCCT	CCGGGAGATG	GGGGCCCGCA	2340
338	TGCTCCTCCA	GGTCCACGAC	GAGCTCCTCC	TGGAGGCCCG	CCAAGCGCGG	GCCGAGGAGG	2400
340	TGGCGGCTTT	GGCCAAGGAG	GCCATGGAGA	AGGCCTATCC	CCTCGCCGTG	CCCCTGGAGG	2460
342	TGGAGGTGGG	GATGGGGAG	GACTGGCTTT	CCGCCAAGGG	TTAG		2504
344	(2) INFORMATION FOR SEQ ID NO: 4:						
346	(i) SEQUENCE CHARACTERISTICS:						
347	(A) LENGTH: 832 amino acids						
348	(B) TYPE: amino acid						

RAW SEQUENCE LISTING
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349 (C) STRANDEDNESS: single
 350 (D) TOPOLOGY: linear
 352 (ii) MOLECULE TYPE: protein
 356 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
 358 Met Arg Gly Met Leu Pro Leu Phe Glu Pro Lys Gly Arg Val Leu Leu
 359 1 5 10 15
 361 Val Asp Gly His His Leu Ala Tyr Arg Thr Phe His Ala Leu Lys Gly
 362 20 25 30
 364 Leu Thr Thr Ser Arg Gly Glu Pro Val Gln Ala Val Tyr Gly Phe Ala
 365 35 40 45
 367 Lys Ser Leu Leu Lys Ala Leu Lys Glu Asp Gly Asp Ala Val Ile Val
 368 50 55 60
 370 Val Phe Asp Ala Lys Ala Pro Ser Phe Arg His Glu Ala Tyr Gly Gly
 371 65 70 75 80
 373 Tyr Lys Ala Gly Arg Ala Pro Thr Pro Glu Asp Phe Pro Arg Gln Leu
 374 85 90 95
 376 Ala Leu Ile Lys Glu Leu Val Asp Leu Leu Gly Leu Ala Arg Leu Glu
 377 100 105 110
 379 Val Pro Gly Tyr Glu Ala Asp Asp Val Leu Ala Ser Leu Ala Lys Lys
 380 115 120 125
 382 Ala Glu Lys Glu Gly Tyr Glu Val Arg Ile Leu Thr Ala Asp Lys Asp
 383 130 135 140
 385 Leu Tyr Gln Leu Leu Ser Asp Arg Ile His Val Leu His Pro Glu Gly
 386 145 150 155 160
 388 Tyr Leu Ile Thr Pro Ala Trp Leu Trp Glu Lys Tyr Gly Leu Arg Pro
 389 165 170 175
 391 Asp Gln Trp Ala Asp Tyr Arg Ala Leu Thr Gly Asp Glu Ser Asp Asn
 392 180 185 190
 394 Leu Pro Gly Val Lys Gly Ile Gly Glu Lys Thr Ala Arg Lys Leu Leu
 395 195 200 205
 397 Glu Glu Trp Gly Ser Leu Glu Ala Leu Leu Lys Asn Leu Asp Arg Leu
 398 210 215 220
 400 Lys Pro Ala Ile Arg Glu Lys Ile Leu Ala His Met Asp Asp Leu Lys
 401 225 230 235 240
 403 Leu Ser Trp Asp Leu Ala Lys Val Arg Thr Asp Leu Pro Leu Glu Val
 404 245 250 255
 406 Asp Phe Ala Lys Arg Arg Glu Pro Asp Arg Glu Arg Leu Arg Ala Phe
 407 260 265 270
 409 Leu Glu Arg Leu Glu Phe Gly Ser Leu Leu His Glu Phe Gly Leu Leu
 410 275 280 285
 412 Glu Ser Pro Lys Ala Leu Glu Glu Ala Pro Trp Pro Pro Pro Glu Gly
 413 290 295 300
 415 Ala Phe Val Gly Phe Val Leu Ser Arg Lys Glu Pro Met Trp Ala Asp
 416 305 310 315 320
 418 Leu Leu Ala Leu Ala Ala Arg Gly Gly Arg Val His Arg Ala Pro
 419 325 330 335
 421 Glu Pro Tyr Lys Ala Leu Arg Asp Leu Lys Glu Ala Arg Gly Leu Leu
 422 340 345 350
 424 Ala Lys Asp Leu Ser Val Leu Ala Leu Arg Glu Gly Leu Gly Leu Pro

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/074,328

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Input Set : N:\Crf3\RULE60\10074328.raw
Output Set: N:\CRF3\07092002\J074328.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:7; N Pos. 4,5,181,182,190,366,617,628,685,714,722,738,784,1022,1029
Seq#:7; N Pos. 1038,1053,1098,1105,1206,1227,1244,1251,1252,1253,1350,1380
Seq#:7; N Pos. 1497,1530,1569,1572,1641,1653,1655,1770,1812,2319,2346,2396
Seq#:8; Xaa Pos.2,63,109,186,205,209,227,228,233,240,243,244,247,260,290
Seq#:8; Xaa Pos.329,336,340,368,414,417,418,431,551,605,773,794,798,823,833

VERIFICATION SUMMARY
PATENT APPLICATION: US/10/074,328

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Input Set : N:\Crf3\RULE60\10074328.raw
Output Set: N:\CRF3\07092002\J074328.raw

L:31 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:32 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:970 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
L:979 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:48
L:988 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:96
L:1003 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:176
L:1006 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:192
L:1009 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:208
L:1012 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:224
L:1015 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:240
L:1018 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:256
L:1024 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:288
L:1030 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:320
L:1033 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:336
L:1036 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:352
L:1045 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:400
L:1048 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:416
L:1072 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:544
L:1081 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:592
L:1114 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:768
L:1117 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:784
L:1123 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:816
L:1126 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:832